

23 June 2016

Dear Chairman Volz, Board Member Cheney and Board Member Hofmann,

Please accept the following comments and proposals for implementing temporary sound-level standards in industrial wind projects.

As a former Lt. Governor who wrote a letter in support of the proposal to build the Georgia Mountain industrial wind project, it has been very disappointing for me to learn from visiting citizens who live within a mile of the industrial wind project that they are experiencing "a significant impairment of quality of life." "A significant impairment of quality of life" are the words used by the Vermont Department of Public Service and exactly what the people I have met with have told me.

In response to a Motion for Relief filed by the McLanes who live 3,800 ft from the Georgia Mountain industrial wind project filed on 2 Nov 2015, the Vermont Department of Public Service wrote the following, "it finds the issues raised in the Motion to be credible and serious. The Department has no reason to think that the sleep disturbances and other health impacts cited are fabricated or exaggerated. Nor does the Department have cause to question the veracity of the range or severity of their health symptoms. The same can be said of the complaints the Department has received from other residents living near the GMCW and other commercial wind sites.... It is,...indicative of a significant impairment of the quality of life for some nearby residents." Rather than seek some relief for the residents who filed the motion, the DPS recommends that they take the matter to superior court. This seems to me an injustice to people who are experiencing a "significant impairment in their quality of life."

On 14 March, Senator Brian Campion experienced firsthand what a "significant impairment in thier quality of life" feels like. He visited the McLanes at their home next to Georgia Mountain Wind and was witness to noise levels of 50-60 dBA. This noise level greatly exceeds the CPG limit of 45 dBA.. The McLanes home is 3800' feet from the Georgia turbines. After spending just a short time there, he sent a letter to the Public Service Board about his negative experience. He stated, "However, while outside, I have no other way to qualify my experience than sharing that I found the sound made by the turbines as too loud and not likely conducive to my being comfortable outdoors for an extended period of time." When asked later, Senator Campion said that he would not want his family to live at that home.

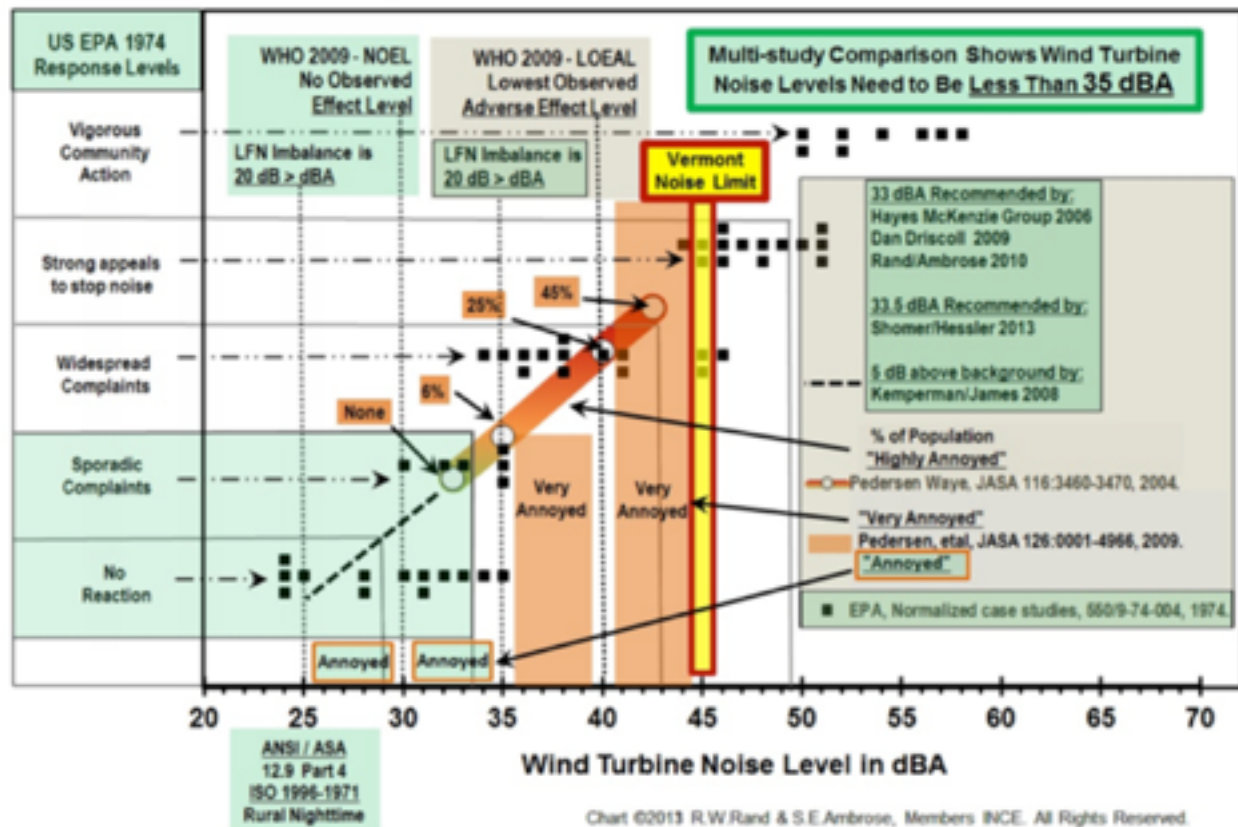
A significant impairment of the quality of life is why the Georgia Board of Civil Authority lowered the assessed property values of residents who live close to the Georgia Mountain industrial wind project. The Swanton industrial wind project proposes to put larger turbines much closer to the families who live on Rocky Ridge. The Department of Public Service states there is a "significant impairment of the quality of life" for residents within 3,800 feet. How would they characterize the quality of life for the 34 families that would be within 2,500 ft of seven proposed 499-foot tall wind turbines on Rocky Ridge?

RSG Inc., the developer's hired consultants published a [Georgia Mt Noise Impact Study](#). Please see link to this [Noise Study](#). According to RSG, "one GE 2.75-120 generates 106 dBA" and "if we add two equal sources together, the resulting sound level will be 3 dB higher." Swanton Wind proposes to erect not two, but seven 499 foot industrial wind turbines. According to the RSG's noise study a chain saw is rated at 110 dBA. Noise does attenuate over distance. However according to RSG, "Harder ground generally increases the sound level at a receiver." Rocky Ridge as the name implies is very hard ground.

The current noise standard written by the Public Service Board says that the turbine noise outside your open bedroom window, averaged over an hour, should not exceed 45 dBA. This means that you could start up a vacuum cleaner (70 dBA) every five minutes and would still meet the noise standard. For comparison, the German noise standard is not to exceed 35 dBA at night time and the Denmark's noise standard in a rural setting is not to exceed 37 dBA at night time, which are much more restrictive.

Maine acousticians Robert Rand and Stephen Ambrose have shown that wind turbine noise complaints rise dramatically at 35dBA. Please see the following chart by Sound Experts R.W. Rand & S.E. Ambrose.

Predicted Community Reaction for Wind Turbine Noise in Quiet Areas



A Canadian Health study found "people who are exposed to greater than 40 dBA" will be "extremely or highly annoyed" and the study connects annoyance and health.

In light of these facts I would ask that the Public Service Board put temporary standards in place to protect the quality of life for Vermonters that live near currently proposed projects. The Comprehensive Energy Plan for Vermont says that we need to learn from the existing projects in Vermont. We know from the issues at existing wind facilities that the current commonly used 45dBA Leq is not working. The PSB set a 30dBA Leq standard averaged over an hour for the indoor noise limit. We have also learned that assumptions that were made early on that sound would attenuate 15dBA from outdoor to indoor by 15dBA were not correct. We have learned from an existing case in Sheffield that the outdoor to indoor attenuation is closer to 1-3dBAs. We also know that Vermont virtually has no enforcement of the existing standard based on the fact that nothing has happened since the 14 March violation of the CPG at Georgia Mountain. Therefore, the temporary standard must be both more protective and aggressively enforced. Based the experience at the McLane's and the fact that 40dBA Leq causes a significant impairment in quality of life, and the attenuation from outdoor to indoor, it stands

to reason that an exterior 35dBA LMax would be a much more protective standard for Vermont.

The LMax standard as adopted by both the State of Maine and New Hampshire would allow for a simplified third-party transparent continuous sound monitoring that would shift the burden of enforcement from the neighbors to the State where it belongs. Any infractions of the standard should be dealt with immediately and the project would be required to scale back or shut down until it is proven that the standard is able to be met. This enforcement must be handled by the State and should not be left to the neighbors. No standard is any good unless it is enforced. These recommendations are in keeping with the State of Vermont "Comprehensive Energy Plan 2016" which lists strategies and recommendations regarding wind energy development.

Please see page 322 of the final CEP 2016.

Strategy 2: Learn from existing in-state wind projects to improve the siting and review requirements and processes for future wind development.

(1) The DPS, ANR, and Department of Health should continue to learn from the operation of existing wind projects to inform any future recommendations for sound, aesthetic, health, environmental, and public engagement guidelines or standards.

(3) In Public Service Board proceedings related to the siting of proposed wind generation projects, the Department should advocate for adoption of sound standards that are clear, readily enforceable, and protective of public health.

I feel very strongly that an industrial wind project is not a backyard hobby operation. These industrial wind projects generate millions of dollars in revenue and profits for their owners and they should be regulated as any other industrial operation. A noise standard is no good unless it is monitored for compliance. After the initial CPG monitoring the only monitoring is done by turbine neighbors. The Public Service Board needs to require continuous noise monitoring of industrial turbines. For example of how this should be done please see this link to see how they monitor noise at the Denver Airport. <http://webtrak5.bksv.com/den3>

The project owners should be charged a fee to pay for this continuous third party monitoring and enforcement just like the FAA does to airlines. If the noise standard is exceeded they should be treated like any other industrial operation in a residential neighborhood and forced to comply with the standard.

Measurement of sound standards should also be taken at property lines. Homeowners have a right to the peaceful use and enjoyment of our property. They have a right to be protected against unlawful trespass on their property.

In granting Certificates of Public Good and their associated establishment and measurement of noise standards for wind turbines inside neighboring homes rather than at property lines, the Vermont Public Service Board has essentially awarded wind developers an uncompensated nuisance noise, health and safety easement across private property even though that neighboring parcel has not been leased to the wind developer.

In effect, future development rights on thousands of acres of private property have been stripped from Vermont's rural citizens and handed to their neighbor's tenant, the wind developer, without compensation as required by Article 2 of the Vermont Constitution. Article 2. [Private property subject to public use; owner to be paid]

The PSB by establishing these protective regulations at the property line, another grievous error is avoided, that of *trespass zoning*. When regulations measure noise and setback distances to neighboring unleased homes rather than property lines, the portion of the neighboring property inside this setback radius has essentially been donated to the neighboring large landowner's tenant to be used as an uncompensated nuisance and noise easement. This is fundamentally unjust and can only be remedied by measuring those distances and noise levels from the property line.

Thank you for reading my recommendations. In light of what we have learned since building these industrial wind projects, I strongly feel we as a state need to do a better job protecting our citizens who live near them or are threatened by the prospect of the construction of new industrial wind projects.

Sincerely,

Brian Dubie

Lt Governor, Vermont

2003-2011

PO Box 1075

St. Albans, VT 05478

brianedubie@gmail.com

802 309 8451